REMARKS

Claims 1 and 7-8 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejection in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 103

Claims 1, 7 and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sangodkar et al. (Sangodkar, H.; Sukeerthi, S.; Srinivasa, R.S.; Lal, R.; Contractor, A.Q. "A Biosensor Array Based on Polyaniline" *Anal Chem.* 1996, 68, 779-783) (of record) and Lemmo et al. (Lemmo, A.V.; Fisher, J.T.; Geysen, H.M.; Rose, D.J. "Characterization of an Inkjet Chemical Microdispenser for Combinatorial Library Synthesis" *Anal. Chem.* 1997, 69, 543-551) (of record) and Newman et al. (Newman; J.D.; Turner, A.P.F. "Ink-jet printing for the fabrication of amperometric glucose biosensors" *Analytica Chimica Acta*, 1992, 262, 13-17) (IDS Ref. AR) and Trojanowicz et al. (Trojanowicz, M.; Krawczynski vel Krawczyk, T. "Electrochemical Biosensors based on enzymes immobilized in electropolymerized films" Chimika Chronika, New Series, 1996, 25, 235-249). This rejection is respectfully traversed.

Claim 1 has been amended to recite a step of printing a plurality of solutions of thin film materials through a plurality of inkjet nozzles simultaneously onto the surfaces of the microelectrodes such that organic thin films are formed on the microelectrodes. Claim 1 has also been amended to recite that each of the plurality of solutions is different. This subject matter is described at, for example, Figure 1 of the application. No new matter has been added. In Figure 1, it can be seen that a plurality of solutions

(Polymer A, Polymer B, Polymer C, Polymer D, and Polymer E) are printed onto a substrate 15 simultaneously. Further, because each of the solutions contains a different polymer, each of the solutions are different.

Claim 1 has also been amended to recite that the inkjet nozzles each have a piezo-electric element, wherein the inkjet nozzles are formed in a multi-line head nozzle. Lastly, claim 1 has been amended to recite that the electro-conductive polymers consist of at least one selected from the group consisting of polythiophene, polymethylethiophene, and polyphenylene vinylene. None of the cited references teach or suggest such a method.

More specifically, none of the cited references teach printing a plurality of solutions onto surfaces of microelectrodes simultaneously, wherein each of the solutions are different. Moreover, none of the cited references teach electro-conductive polymers selected from the group consisting of polythiophene, polymethylethiophene, and polyphenylene vinylene. Because none of the cited references teach or suggest such a method, the claimed method would not have been obvious.

Furthermore, Applicant respectfully asserts that the main reference Sangodkar merely teaches the disposition of a single droplet at a time by the use of a syringe. Although the Examiner alleges that it would have been obvious to modify the teachings of Sangodkar with the teachings of Newman and Lemmo and Trojanowicz, none of these references teach or suggest simultaneously ejecting a plurality of solutions onto the surfaces of microelectrodes, wherein each solution is different. Because each of these references is silent with respect to this aspect of the claimed invention, Applicant respectfully asserts that the claimed invention would not have been obvious.

Still furthermore, the Examiner alleges on page 4 of the Office Action that with respect to the limitation that the solution has a viscosity of about 3 centipoise or less, it is noted that products of identical chemical composition cannot have mutually exclusive properties. Notwithstanding, the present method does not claim a chemical composition. In contrast, the claimed method recites a method of printing a solution onto a microelectrode. The claimed solution comprises an electroconductive polymer and a solvent. Because both a polymer and a solvent are present, the viscosity of the solution can be adjusted by a number of factors including adjusting the molarity or the molality of both the polymer and the solvent. Because these aspects of a solution can be adjusted, it would not have been obvious to merely use similar chemicals to adjust the viscosity to about 3 centipoise as alleged by the Examiner. Because the Examiner has not provided a *prima face* case of obviousness with respect to this aspect of the claimed invention (that is, the Examiner has not provided a references that teaches or suggests this aspect of the claimed invention), the claimed invention would not have been obvious.

What's more, in the Response to Arguments section of the Office Action on page 8, the Examiner alleges that a person of ordinary skill in the art would readily understand that an alternative setup would be required for electrochemical polymerization using inkjet technology and would make the necessary adjustments when switching from needle to inkjet technologies. Notwithstanding, Applicant respectfully asserts that rejections based on 35 U.S.C. § 103 must rest on a factual basis. In making such a rejection, the Examiner has the initial duty of supplying the requisite factual basis and may not, because of doubts that the invention is patentable,

resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in the factual basis. *In re Warner*, 379 F.2d 1011, 1017; 154 USPQ 173, 178 (CCPA 1967), *cert. denied*, 389 U.S. 1057 (1968). Evidence of a suggestion, teaching or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved, although the suggestion more often comes from the teachings of the pertinent references. The range of sources available, however, does not diminish the requirement for actual evidence. That is, the showing must be clear and particular. Broad conclusory statements regarding the teachings of multiple references, standing along, are not "evidence." *In re Dembiczak*, 175 F.3d 994, 999; 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).

Here, the Examiner has resorted to speculation, unfounded assumptions, and a hindsight reconstruction in finding that it would have been obvious to modify the syringe method of Sangodkar with the teachings of Newman and Lemmo and Trojanowicz. This is because the syringe of Sangodkar includes electrodes to cycle an electric potential through the electroconductive polymer to perform an electro-deposition process. By modifying Sangodkar to include the inkjet technology taught by the secondary references, the electric potential that is cycled through the syringe to the electroconductive polymer would be lost. This would change the principle of operation of Sangodkar, which is impermissible. Nevertheless, to overcome the fact that the principle of operation of Sangodkar would be changed, the Examiner has alleged that one of ordinary skill in the art would make the necessary adjustments to the inkjet so as not to lose the cycling of the electric potential through the electroconductive polymer.

This piecemeal analysis, however, is founded on speculation, unfounded assumptions, and a hindsight reconstruction which, as stated above, is impermissible. Because the basis of the Examiner's allegation is impermissible, the Examiner has not provided the requisite amount of factual evidence that renders the modification of Sangodkar obvious. As such, Applicant respectfully asserts that it would not have been obvious to modify Sangodkar with the teachings of the secondary references to arrive at the claimed invention.

In summary, Applicant respectfully asserts that the claimed invention is not obvious. None of the cited references teach or suggest a method of printing a plurality of solutions on a substrate simultaneously, wherein each of the solutions is different. Further, none of the cited references teach or suggested electroconductive polymers selected from the group consisting of polythiophene, polymethylethiophene, and polyphenylene vinylene. Lastly, none of the cited references render obvious a solution with a viscosity of 3 centipoise or less, and the Examiner's modification of the Sangodkar with the secondary references is a hindsight reconstruction of the claimed invention that is supported by a deficient amount of factual evidence. For these reasons, Applicant respectfully requests reconsideration and withdrawal of this rejection.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: Aug 18, 2005

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